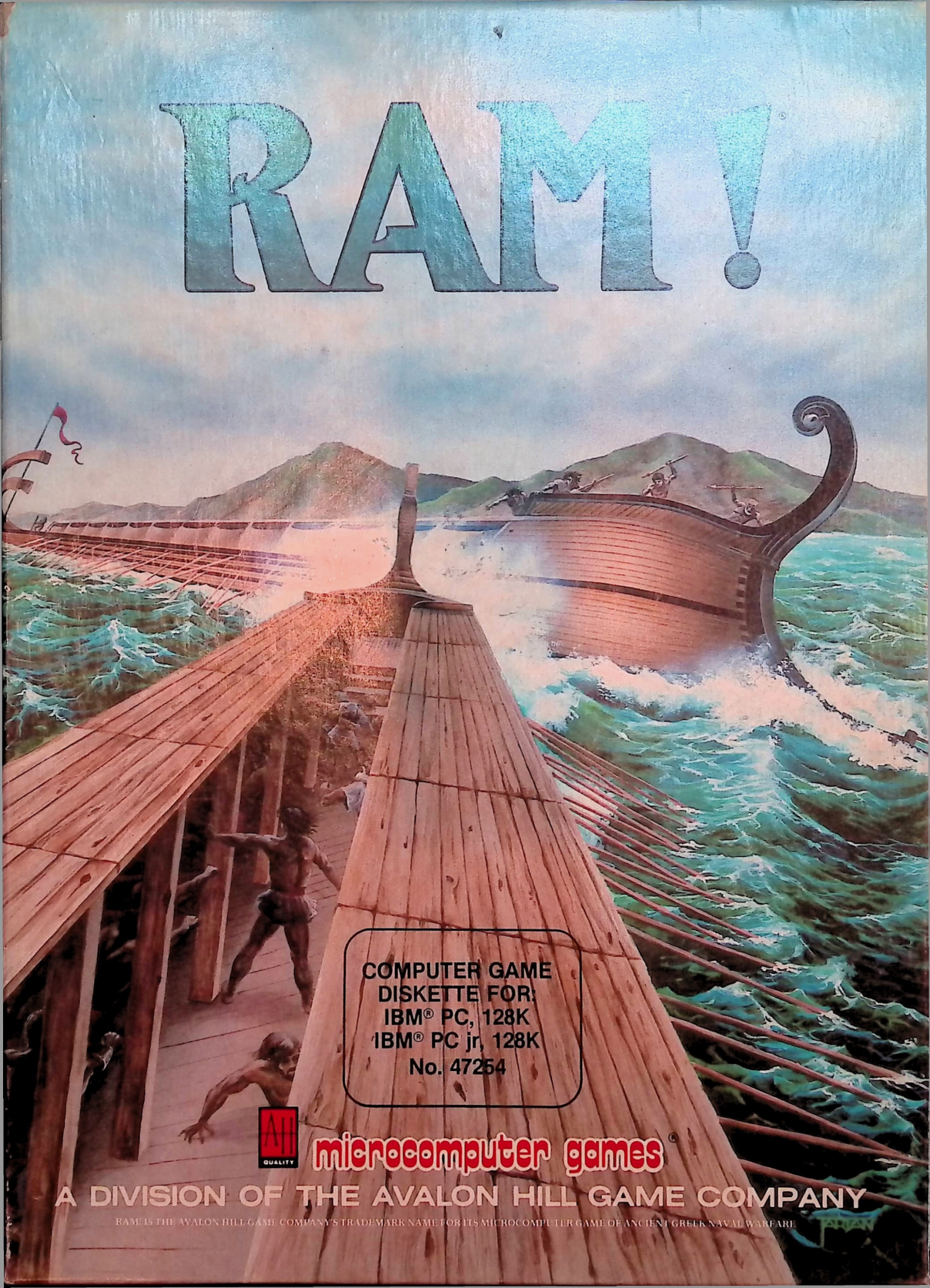
RAM!
COMPUTER GAME
DISKETTE FOR:
IBM® PC, 128K
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RAM!®

For: IBM-PC®, PC-jr®, and IBM-XT® with 128K memory. Also compatible with Compaq® and Seequa® computers. Required to play: color graphics board and one double-sided disk drive.

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Meanwhile unstirring and with smoldering heart,
The godlike athlete, son of Peleus, Prince Achilleus
waited by his racing ships.
He would not enter the assembly of emulous men, nor
even go to war, but felt his valor stalling in his breast
with idleness, and missed the cries of battle.

– Iliad, book 1

1. INTRODUCTION

After the alliance of the Greek city-states repelled the Persian invasions of the fifth century B.C., internal rivalries led to a civil war known as the Peloponnesian War (431 – 404 B.C.). At the root of the conflict was the struggle between Athens and Sparta to become the dominant power in the eastern Mediterranean.

The war started when Athens sought to put down a revolt in Potidaea, an ally and a Corinthian colony. Athens tried to crush the revolt before it could spread to other islands. The plan backfired, however, as the Potidaeans, with Corinthian and Spartan backing, encouraged other Athenian allies to revolt. Meanwhile, the Spartans called a congress of their allies, which had formed a group called the Peloponnesian League. The intent of this meeting was to convince the League to declare war on Athens, the argument being that while Potidaea itself might not be worth a war, waiting for another move by Athens would only make their position worse. But the real cause of the war was simpler, as the Greek historian Thucydides wrote:

"The real cause I consider to be the one which was formally kept most out of sight. The growth of the power of Athens, and the alarm which this inspired in Lacedaemon, made war inevitable."

So the Peloponnesian War became a conflict between Athens and Corinth for control of eastern Mediterranean trade. Corinth's alliance with the Peloponnesian states brought them the use of Sparta's army, then the strongest in Greece. The war quickly settled into a conflict between the elements, for Sparta was the dominant land power and Athens the ruler of the seas. Only the walls around Athens, and her successful naval campaigns, delayed her eventual defeat.

The war ended in 404 B.C. with a siege of Athens after which her city walls were torn down. Athens was ruined as a major power, and Greece remained divided among its squabbling city-states until the coming of Philip of Macedon and his son Alexander in 357 B.C.

RAM! concentrates on the fleet actions of the early part of the Peloponnesian War, when the advanced tactics of the Athenian admiral Phormio turned battles from slugfests into contests of maneuver and strategy. The individual scenarios are designed to show the historical conditions, which you can change to make the game easier or harder.

2. THE COURSE OF THE GAME

2.1 LOADING THE GAME

Boot up the computer with your Drive Operating System (DOS) disk. Remove the DOS disk and insert the game disk. Type "RAM", press the ENTER key, and the game will load.

2.2 SETUP

The title display starts each scenario, including the campaign game; to skip it, press **F1**. Before play, you will need to select the scenario, palette, speed, sound and difficulty.

Scenarios: You may choose a training mission, a historical scenario, or the campaign game. The training mission is a fleet action with up to 10 ships participating on both sides. The historical scenarios simulate fleet combat during the Peloponnesian War. Each scenario has six Athenian ships fighting an equal or greater number of the enemy, and should be played only when you have learned how to command more than one ship. The campaign game allows you to build your navy and fight each of the four historical scenarios, with the results of one battle affecting the next.

Palette: For both color and monochrome monitors, there are eight possible color combinations to represent water, land and fleets. Press the number of the combination you wish to use. If you are using a TV as a monitor, you may have to adjust the display further: see Appendix B.

Speed: This controls the speed of the computer as it cycles through a turn. *RAM!* is played in real-time, meaning that there is no pause between phases. One is the slowest speed, five is the fastest.

Sound: If your computer is equipped for sound, this option can be used.

Difficulty: This controls the skill of the computer opponent, with one being the weakest, five the strongest. The scenarios are historically balanced at difficulty level three, with levels four and five providing more challenge.

2.3 COMMAND POINTS, MOVEMENT AND COMBAT

The player sails the Athenian ships and attempt to ram and board the enemy's ships. A player can give three types of orders: speed, directional, and functional. An order may be given at any time, but when they are obeyed varies with the order.

Speed and direction orders are entered with the arrow keys, followed by the ship number for which the order is meant. Functional orders are given using the function keys. See Section 3.1 for a complete list.

Speed and direction orders cost the ship a certain number of Command Points. Each ship has an amount of command points per round equal to two times the speed setting (the higher the speed, the more command points). Command points are not accumulated from turn to turn, but are renewed at the end of the Recovery Phase.

Speed orders are given using the up and down arrow keys, followed by the number of the ship. There are five speed levels: backing oars, rest, slow, moderate and ram speed. A speed order will change the speed one level. The orders may be given anytime, but take effect during the next movement phase. Speed increases cost two command points, decreases one point.

Directional orders are given using the left and right arrow keys, followed by the number of the ship. A directional order will take effect immediately and turn the ship 60 degrees. Direction changes cost two command points.

2.4 VICTORY CONDITIONS

Your goal is to destroy the enemy fleet. Play continues until one fleet is sunk, captured, or has fled the map. Points are awarded to both sides for destroying enemy ships. These points are adjusted for initial enemy ship strength, method of loss, and difficulty level; thus, it will cost you more points to lose a ship at difficulty level five than at level one. Ships captured or sunk are worth the most points. Ships that leave the strategic map in the campaign game contribute to their side's defeat, but are available to fight future actions. Athenian ships which run aground are captured.

3. SEQUENCE OF PLAY

RAM! is a real-time game, meaning that the game automatically moves from round to round. Pressing **F9** (Status Report) will halt the game temporarily.

A turn in *RAM!* consists of five phases:

1. Athenian/Peloponnesian move orders
2. Command execution
3. Boarding
4. Ungrappling
5. Recovery

3.1 ATHENIAN/PELOPONNESIAN MOVE ORDERS PHASE

Both sides enter their movement orders. No ships will move during this phase.

There are three types of orders: speed, directional and functional. Speed and directional orders are discussed in Section 2.3, but a complete list is included below. Functional orders are called by the function keys. They are:

F1 *Help*
Shows a list of orders available to the Athenian commander.

F2 *Numbers*
Shows the identification numbers of the ships on the tactical map. They will appear briefly, then disappear. Athenian ships are numbered from 1 to 6, while enemy ships are numbered from 11 to 18.

F3 *Tactical Map*
After prompting for an Athenian ship number, it will redraw the map using that ship as the center. This command can show ships which have left the tactical map but not the strategic.

F4 *Strategic Map*
Shows the entire map available for the scenario. The box outlines the area covered by the current tactical map. Numbers indicate Athenian triremes; ships not shown are either too close to a higher numbered ship to appear, or are out of play (being sunk, captured, run aground, or travelled beyond the area covered by the Strategic Map.)

F7 *Surrender*
An honorable surrender will cost you less points than a fight to the finish.

F9 *Status Report*
Gives the current status of the rowers and their fatigue value, plus the hull and marine strength of all ships. Values are shown as colored bars, with all strengths drawn in proportion to the undamaged value of the strongest ship. (For example, the bar showing the hull strength of the strongest undamaged ship will completely fill its allotted space, while others will be draw relative to it).

F10 *Abort Game*
When pressed twice, will halt the game.

(Left Arrow) *Turn to port*
When followed by the number of the ship, will turn it 60 degrees counterclockwise. Use Ø to cancel an order. Execution is immediate and costs 2 command points.

(Right Arrow) *Turn to starboard*
The ship turns 60 degrees to starboard. Cost: 2 command points.

(Up Arrow) *Increase speed*
When followed by the number of the ship, will increase its speed one level, effective during the next movement phase. Cost: 2 command points.

(Down Arrow) *Decrease speed*
Reduces a ship's speed one level. Cost: only 1 command point.

3.2 COMMAND EXECUTION PHASE

Both fleets carry out their current orders. Commands may still be given during this phase, if the rowers are not fatigued and enough command points are available. Command points are renewed at the end of the Recovery Phase.

If one ship rams another, damage is calculated. If both are still afloat, grappling is automatically attempted.

Ships which approach the shoreline may run aground. The exact distance at which this occurs varies, so it is best to avoid cruising near the coast. You might try to lure the enemy ashore, but they will usually know the coast better than you.

3.3 BOARDING PHASE

When grappled, the stronger ship will attempt to capture the weaker. If successful, the captured ship is removed from the display, and the captor is delayed moving for one round while its rowers and marines reboard.

3.4 UNGRAPPLING PHASE

The weaker ship will automatically attempt to break any grapples. A grappled ship may neither turn or change speed.

3.5 RECOVERY PHASE

Rowers recover fatigue points and ships recover command points. Rammed ships take on water while they attempt repairs. Ships may swamp and sink.

Playing several games will show that the game moves quite fast, so that keeping track of each phase may only cause confusion. The only phase of any consequence is the Recovery Phase. Also, you can spend your points at any time, with direction commands taking effect immediately and speed commands during the Movement Phase. We suggest keeping track of your command points, and how long it is before the next Recovery Phase.

4. THE SCENARIOS

4.1 TRAINING MISSION

A training mission will allow you to gain experience in commanding a small trireme fleet. You will choose the palette, speed, sound and difficulty as usual, plus how many ships the Athenians and Spartans will have, up to a maximum of five per side. We suggest beginning with a one-on-one action, working up to where you can control more ships.

4.2 HISTORICAL SCENARIOS

These scenarios portray historical actions from the Peloponnesian War. The fleets have been reduced from actual numbers, with one ship representing from 1 to 10 triremes.

Chalcis 429 B.C.

Phormio, the Athenian commander, has halted a Corinthian fleet transporting troops to support their Spartan allies. Knowing that their ships cannot match the better-crewed Athenians, they have formed their ships into a circle. You command the attack against one quadrant of that circle.

Advantages: You have faster ships and a better crew.

Disadvantages: They out-number you eight ships to six, and have strong marine contingents aboard each ship.

Naupactus 429 B.C.

After the Athenian victory at Chalcis, Phormio withdraws to prepare for the next attack, but is caught by the Corinthians while trying to get away from land. With your triremes in line, three columns of enemy ships attempt to ram you while the shoreline prevents your escape.

Advantages: You have faster ships and stronger crews.

Disadvantages: The Corinthians have stronger ships and a larger marine contingent.

Bay of Pylos 427 B.C.

Demosthenes, the Athenian admiral, persuaded the city-state to establish a supply point near Pylos on the Peloponnesian coast. After a force was landed, the Spartans replies by besieging the outpost. Your Athenian fleet is sent to destroy that Spartan fleet.

Advantages: You have more rowers and stronger ships.

Disadvantages: The Spartans have more marines and outnumber you eight ships to six. Also, the size of the bay makes it difficult to maneuver.

Erineus 413 B.C.

Throughout the war, each side sought to control the narrow gulf of Corinth. Now, stronger Corinthian ships are trying to force a fight in the narrow strait.

Advantages: You have more rowers who are better able to resist fatigue, plus you have more marines.

Disadvantages: The Corinthians have stronger ships, and the narrow gulf will make maneuvering hazardous.

4.3 THE CAMPAIGN GAME

The campaign game consists of playing the four historical scenarios in order. Each scenario in the campaign will begin with the player building and outfitting the Athenian fleet for battle.

After choosing the speed and difficulty levels, the fleet outfitting screen will appear. With the build points available, you select the number of ships (up to six) and decide if you want to improve the fleet's strength, rowers or marines. Use the **INS** and **DEL** keys to adjust the attributes. As you subtract ships, you regain build points which you may apply elsewhere. The number of initial build points depends upon the difficulty level: building ships at difficulty level one will be cheaper than at level five.

Unlike the historical scenarios, your ships begin as equals of the enemy. Thus, you can decide to build a larger, weak fleet, or a smaller and stronger fleet.

After the first scenario, you will start with a fleet composed of the ships that survived the previous scenario. You will receive refitting points based upon enemy ships sunk or captured, with captured ships automatically refitted at half the normal cost. Refitting points not used will be kept for later rounds.

5. DESIGNER'S NOTES

5.1 TRIREMES AND MANEUVERS

Triremes used three levels of rowers, each manning one oar. Top speeds are thought to be in the range of 12 to 15 kilometers per hour. On normal cruises, it was common to use only one or two banks of rowers at a time, allowing the others to rest. This is reflected in the game by fatigue points. Fatigue points represent the stamina of the rowers. Moderate speeds tire the rowers, while ramming speed can only be used in short bursts. Ships at rest or at slow speeds will allow the rowers time to catch their breath.

Triremes were more like modern racing shells than wooden warships. Their shallow drafts made them highly maneuverable, capable of turning in place. Triremes at slow speeds can change direction up to 120 degrees per round (command points and fatigue allowing), while ships travelling faster turn more slowly. Because there was little room to store rations, the crews would stay on shore at night, beaching their triremes if necessary. Since the historical scenarios take place near land controlled by either the Spartans or the Corinthians, Athenian ships that run aground are considered captured by the enemy.

5.2 RAMMING AND RAKING

The main weapon of the trireme was the bronze-plated ram. Superior seamanship was required to strike an enemy's unprotected flanks, but not without exacting a price from the ramming vessel. Prow-to-prow rams were almost as damaging to the attacker as the defender. Since the Spartans and their allies granted the Athenians a mastery of trireme maneuvers, the Peloponnesian fleets instead reinforced the bows of their ships. Brute force thus allowed them to meet the Athenians head-to-head.

The safest ram for the attacker was to hit its target broadside, but rams were also made prow-to-prow or prow-to-stern. In prow-to-prow rams, considerable damage could be done to the attacking ship, especially along its keel. In the second case, the attacker may sustain damage, but the victim's steering oars might be crippled.

A second strategy was the oar rake. A trireme speeds towards an enemy, then quickly turns and ships its oars (withdrawing them into the ship). The attacker's momentum glides the ships past its opponent, shearing the unlucky vessel's oars and disabling it. Oar rakes sometimes occur inadvertently, when the ramming ship misses its target and shears the victim's oars instead.

5.3 GRAPPLING, BOARDING, AND SINKING

When two triremes come into contact through a ram or oar rake, there is a chance of grappling. This is handled automatically, with the stronger ship attempting the grapple and the weaker attempting to repel it. Once ships are grappled, boarding takes place automatically; the stronger body of marines, helped by some crew members, will board and attempt to capture the other trireme. While, historically, captured ships were used by the victors, the time required to subdue the original crew, transfer new rowers and get under way extends beyond the scenario's time-span. Thus, captured ships are simply removed from play in the game.

Triremes were very difficult to sink. Damaged ships would take on water and float at or just below the water's surface. These aspects were simplified in the game, with ships damaged enough to sink being removed from play. Historically, these ships would remain afloat as navigational hazards.

5.4 CATAPULTS AND GREAT BALLS OF FIRE

Hollywood aside, catapults throwing balls of flame were unknown to the Greeks. Their triremes were just too flimsy to support heavy weapons. Catapults were used sometimes in the Roman era, but by then the ships were sturdier and, consequently, less maneuverable.

6. HISTORICAL COMMENTARY

"Their strength lay in the greatness of their navy, and by that and that alone they gained their empire."

Alcibiades; 415 B.C.

The development and decline of the ram as a weapon began and ended with the Greeks. In this age of the trireme, naval battles were fought in one of two ways. The most common tactic was to load the ships with as many fighters as possible, bring them alongside the enemy, and slug it out until one ship was captured. This sea-going rumble was merely an extension of a land battle, and the concepts of maneuver and tactics were not considered.

Where and how the ram was invented is lost to history. The Greeks used a stout thick timber sheathed with bronze or iron that projected several feet beyond the prow. It was either placed above or below the waterline, the latter a more devastating way to sink a ship. Because its function was to run into other ships, the vessel's hull and keel had to be strengthened to accept the shock of the blow. The ships were built light and narrow to cut the water like a knife. They had to be light enough to drag onto land at night or before bad weather. The triremes were capable of making about seven knots, given favorable weather conditions. They were extremely maneuverable, able to go anywhere regardless of the wind, and capable of making the same speed reversing as well as advancing.

"A collision at sea can ruin your entire day."

Attributed to Thucydides, 5th c. B.C.

But the galleys had to deal with severe handicaps as well. They could be swamped easily in a storm, and they were far from seaworthy, so naval operations were limited to the spring and summer months. Lacking equipment that would allow them to sail out of sight of land, they huddled along the shore. This made secrecy difficult to maintain. Because there was little room for supplies, long-range operations were out.

Much information about these vessels has been lost, but we know that the Athenian trireme had an average of 170 oars, with 62 in the upper bank and 54 in the lower two banks. The positioning of the rowers is not known, but some guess that they were arranged in tiers along the sides of the ships. We do know that the oars were light, and that one rower was assigned to each, but how they were able to coordinate their movement remains a mystery.

As in modern times, the sailors of the galley were divided into officers and crew. These were crewed by free citizens, usually only for the duration of the campaign. There were no indications that conditions were harsh, or that mutunies took place (unlike the armies of the time).

The galley was commanded by the *strategoi*, or general. The city-states made no distinction between the commanders of land and sea; Phormio, for example, had commanded armies in both elements. Under the *strategoi* were four officers: the pilot or sailing master; the *proreus* in charge of the bow; the supply officer; and the boatswain *keleustes* who watched over the rowers. The latter would be stationed over the rowers, accompanied by a flute player who would play rhythmic music to guide the rowers.

"Knowledge of naval matters is an art as well as any other and not to be attended to at idle times and on the by."

Pericles, 460 B.C.

What is surprising about the rowers in the Athenian navy was that it consisted of citizens from all the classes. The city-state took great pride in its navy during this period. Regular drills were held so that all would know the fundamental of sailing. Xenophon's *"Hellenica"* describes this form of conscription: "Now that the position of affairs, including the blockade of Mytilene, was fully known at Athens, a vote was passed to send out a reinforcement of 110 ships. Every man of ripe age, whether slave or free, was impressed for this service, so that within 30 days the whole 110 vessels were fully manned and weighed anchor.

"Amongst those who served in this fleet were also many of the knights."

Training people to man the oars was constantly going on in Hellenic Greece. The schooling started young, with mock battles and races to celebrate important festivals. The Athenian Senate watched over ship construction and outfitting, and were penalized if the ships they ordered built were not completed.

"A man who is perpetually voyaging is forced to handle the oar, he and his domestic alike, and to learn the terms familiar in seamanship," so wrote Pseudo-Xenophon – an unknown Grecian writer who continued Xenophon's histories. "(The Athenians) have learnt their business . . . so that the majority of them are able to row the moment they set foot on board a vessel, having been in a state of preliminary practice all their lives."

The Athenians were not the only ones who took such care; the Corinthians took two years of preparation before setting out to crush the revolt of their colony on Corcyra.

TACTICS

There were two systems of naval tactics. The "ancient system" consisted simply of hand-to-hand combat between the marines and rowers of each ships. The battle of Sybota between the Corinthians and the Corcyreans in 432 B.C. was such a battle, as described by Thucydides:

"The decks of both fleets were crowded with heavy infantry (*hoplites*), with archers and javelin men; for their naval arrangements were still of the old clumsy sort. The engagement had almost the appearance of a battle by land. When two ships once charged on another it was hardly possible to part company, for the throng of vessels was dense, and the hopes of victory lay chiefly in the heavy-armed, who maintained a steady fight upon the decks, the ships meanwhile remaining motionless. There were no attempts to break the enemy's line. Brute force and rage made up for the want of tactics. Everywhere the battle was a scene of tumult and confusion."

The use of the ram as an offensive weapon required considerably more skill than before. Under the old tactics, ships simply met head-on, grappled, and sent over their boarding parties. To use the ram, galleys were lightened, and their speed increased to deliver a greater shock. The number of marines was reduced considerably to where, by the time of the battles of Chalcis and Naupactus, ten *hoplites* were capable of defending a galley against marauders.

The characteristics of the galley affected naval strategy. Its ties to the shore made it much easier to find a enemy fleet. A fleet might escape detection by heading out onto the open sea, but it must return to shore sometime. This made operations in enemy waters, like blockades, more difficult. Ships rarely patrolled at night, and the lack of provisions made an extended blockade extremely difficult. To illustrate the point, Thucydides published a letter from Nicias, commander of the Athenian forces besieging Syracuse, to the Athenian people:

"Our fleet was originally in first-rate condition: the ships were sound and the crews in good order, but now, as the enemy are well aware, the timbers of the ships, having been so long exposed to the sea, are soaked, and the efficiency of the crews is destroyed. We have no means of drawing up our vessels and airing them, because the enemy's fleet is equal or even superior in numbers to our own, and we are always expecting an attack from them. They are clearly trying their strength; they can attack us when they please, and they have far greater facilities for drying their ships, since they are not, like us, engaged in a blockade."

The best tactic to maintain a blockade was to seize a nearby station, fortify it, and use it as a naval base. Such an action sometimes resulted in the enemy attempting to recapture the base, as the Spartans did in the Bay of Pylos.

THE PELOPONNESIAN WAR

The conflict between Athens and Sparta began even while they were cooperating to defeat the Persian invasion in the middle of the fifth century B.C. Once their common enemy was gone, the next question was who would reign supreme in the Aegean: the trading, democratic power of Athens or the military, oligarchical power of Sparta and her allies calling themselves the Peloponnesian League. One ruled the sea; the other land. During the on-again, off-again war, Sparta would send her troops north during the summer to ravage Attica, while Athens would send her fleets south to attack Sparta.

It is worth noting as a measure of Athen's dominance as a sea power that it was two years into the war before a major sea action took place.

CHALCIS, Summer 429 B.C.

As part of Athen's blockading strategy, the admiral Phormio was watching the entrance to the Corinthian Gulf with his force of 20 triremes. Trapped within the Gulf was the majority of the Peloponnesian naval strength. Determined to break out, the Peloponnesian admiral collected a force of 47 triremes and sailed down the Gulf from Corinth. Their orders were to sail past without engaging the Athenians, and proceed to Acarnania, where a land offensive was in progress.

Phormio had other ideas. He let the Peloponnesians pass, and followed on a parallel course. He then positioned his fleet between his enemy and the Acarnanian coast. The Peloponnesians responded by forming a large unbroken circle to await the Athenian attack.

But instead of attacking immediately, Phormio circled the enemy, causing great confusion as the captains of each ship responded in different ways. When the morning breeze that Phormio had been expecting blew down the Gulf, the disorder increased. According to Thucydides' account:

"Their ships, which by this time were crowded into a narrow space, were distressed at once by the force of the wind and the small craft knocking against them; ship dashed against ship, and they kept pushing one another away with long poles; there were cries of 'keep off' and noisy abuse, so that nothing could be heard.

"At that moment Phormio gave the signal; the Athenians, falling upon the enemy, began by sinking one of the admiral's vessels, and then wherever they went made havoc of them; at last such was the disorder that no one any longer thought of resisting, but the whole fleet fled."

NAUPACTUS, Summer 429 B.C.

Weeks later, Phormio fought a second battle that began with his fleet of 20 triremes outnumbered by the 76 Peloponnesian galleys, commanded by the Spartan admiral Brasidas. For more than a week, the two fleets maneuvered off Naupactus without coming to blows: "the one [Brasidas] resolved not to sail into the open sea, fearing a recurrence of their disaster, the other not to sail into the straits, because the confined space was favorable to their enemies."

But Brasidas was considerably more skillful than the commander at Chalcis. By feinting against Athenian-held Naupactus, he lured Phormio into sailing for Naupactus. In doing so, Phormio found his ships sailing between the shoreline and the Spartan fleet. Brasidas attempted to cut off the line of ships in the middle. The trap sprung, Phormio has no choice but to flee. By swift rowing, 11 of the 20 galleys pulled their way out of the trap, but the rest were captured and their crews massacred.

The pursuit continued to the port walls of the city, with the last ship in the line suddenly turning around a merchant hulk anchored at the harbor entrance and ramming and sinking a Peloponnesian ship.

Spread out as they were, some of the Peloponnesian ships halted at this unexpected action and waited for the rest of the fleet. Some ran aground, not knowing the terrain. Phormio took advantage of the confusion to counter-attack the fleet and drive them back, managing to retake eight of the nine galleys captured earlier in the day.

BAY OF PYLOS, 427 B.C.

This battle was a brief action that revolved around retaking a piece of land that the Athenians had captured. The land in question was Pylos, a high promontory on the Messenian coast. Demosthenes was able to garrison the point, and was given five ships to defend it from sea. While he was attacked many times, he was able to repulse all attempts.

Meanwhile, the Athenian admirals Eurymedon and Sophocles decided to attack the Spartan fleet in the harbor of Pylos, a large bay just south of the garrison. Dividing their forces in two, they entered the bay and defeated the enemy after a stubborn battle. In addition to defeating the Spartans and capturing 60 ships, they blockaded the port and forced the surrender of a group of Spartan infantry.

The effect of these three battles was evident: the Peloponnesians, in addition to the weakened morale caused by these sudden attacks, was forced to abandon their yearly invasion

of Attica to defend their coastlines.

ERINEUS, 413 B.C.

Through the leadership of the Athenian general Pericles, Athens made peace with her enemies in 415 B.C. But it was brief: under the influence of Alcibiades, they renewed the war with an attempt to take Syracuse in Sicily. Through a combination of bad luck and bad leadership (Alcibiades was charged with blasphemy in the interim, and leadership of the expedition was handed over to a pacifist, Nicias), the expedition met with disaster.

Meanwhile, the Corinthians had built up their squadron opposite Naupactus. Their commander, Polyanthes, decided to offer battle by arraying themselves in a line and awaiting the Athenian charge. Knowing that the enemy were better sailors, Polyanthes strengthed the rams and anchored both ends of his line close to land so that the Athenians could not outflank him.

It was a closely-fought battle that resulted in both sides claiming a victory. No Athenian ships were sunk, but seven were disabled when their bows were crushed by the heavy Corinthian rams. The Corinthians lost three galleys, but were pleased at not being completely beaten.

Tactically, Polyanthes realized that the Athenian superiority in tactics required considerable maneuvering room. Fighting in closed waters forced a return to the "old style" tactics and put the ram as a secondary weapon, where it remained until the rowing battleship disappeared from the world's seas.

7. GLOSSARY

Diekplous – A naval maneuver in which the ships charge through the enemy's line, attempting to shear their oars along the way. If successful, the attacking fleet can turn about to ram the enemy (anastrophe).

Fatigue Points – A measure of the crew's ability to row at high speeds. When depleted, the ship cannot travel faster than slow speed until the crew recovers.

Grapple – A maneuver in which one ship attaches itself to another. Once secured, a boarding party can attack.

Oar Rake – A maneuver in which a trireme approaches an opponent and attempts to shear their oars, crippling the ship.

Periplous – A trireme ramming maneuver which outflanks the enemy, allowing the successful admiral to attack from the rear. It usually requires a greater number of ships to complete.

8. BIBLIOGRAPHY

Greece and Rome at War, Peter Connolly. Prentice-Hall Inc., Englewood Cliffs, NJ, 1981

"Ancient Oared Warships," Vernard Foley and Werner Soedel in Scientific American, pp 148-163, April, 1981

The Battle of Salamis, Richard B. Nelson. William Luscombe Publishers, Ltd., London, 1975

Greek and Roman Naval Warfare, William L. Rodgers. Naval Institute Press, Annapolis, MD, 1964.

History of the Peloponnesian Wars, Thucydides.

Hellenica (A History of Greece), Xenophon.

APPENDIX A : SAVING SCORES

"While memory holds a seat in this distracted globe, remember thee! Yea, from the table of my memory I'll wipe all trivial fond records."

Hamlet

High scores are kept for each of the scenarios. To clear previous scores, press **C** when prompted, and all the scores for that scenario will be set to zero.

APPENDIX B : SELECTING A MONITOR

If you are using a composite monitor or a tv, and the display isn't lined up properly, use the mode command on your DOS disk to change the allignment. Type "RAM", press ENTER, and the game will start.

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QUESTIONS ON PLAY

The clarity of these rules has been verified by *Software Testers of Universal Microcomputer Programmers (STUMP)* and deemed *"complete"* in all facets of instruction. Please re-read them in areas that seem unclear at first reading. Questions on play can be answered by the factory *only* upon receipt of a self-addressed envelope bearing first-class postage.

IF YOU CANNOT LOAD THE PROGRAM

1. Check your equipment carefully to be sure that all cables and connections are correct.

2. Re-read the section in your computer's manual that tells you how to load software. Try to load software again.

3. If possible, load another program from a tape or disk you know works on your computer. This will prove that your equipment works. Try once more to load your game.

4. The normal reason software will not load is tape recorder or disk drive head misalignment. Your computer may be able to save and load programs on its own disk drive, but be unable to read software made on a different disk drive for this reason. Be sure your heads are correctly aligned. Your local computer store or dealer can help you with this.

5. If the program still cannot be loaded, send the software, with a complete description of the problem (what type of computer you have, what the computer says, if anything, when you try to load the software or play the game, and what you did to try to get it to load) to:

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Defective software will be replaced.

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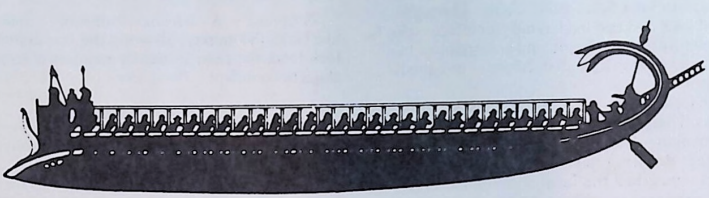

COMMANDS

There are three types of orders: speed, directional and fuctional. Speed and directional orders are described in Section 2.3, and fuctional orders are described below. Fuctional orders are called by the function keys.

F1 *Help*
Shows a list of orders available to the Athenian commander.

F2 *Numbers*
Shows the identification numbers of the ships on the tactical map. They will appear briefly, then disappear. Athenian ships are numbered from 1 to 6, while enemy ships are numbered from 11 to 18.

F3 *Tactical Map*
After prompting for an Athenian ship number, it will redraw the map using that ship as the center. This command can show ships which have left the tactical map but not the strategic.

F4 *Strategic Map*
Shows the entire map available for the scenario. The box outlines the area covered by the current tactical map. Numbers indicate Athenian triremes; ships not shown are either too close to a higher numbered ship to appear, or are out of play (being sunk, captured, run aground, or travelled beyond the area covered by the Strategic Map.)

F7 *Surrender*
An honorable surrender will cost you less points than a fight to the finish.

F9 *Status Report*
Gives the current status of the rowers and their fatigue value, plus the hull and marine strength of all ships. Values are shown as colored bars, with all strengths drawn in proportion to the undamaged value of the strongest ship. (For example, the bar showing the hull strength of the strongest undamaged ship will completely fill its allotted space, while others will be drawn relative to it).

F10 *Abort Game*
Pressing twice will end the game.

(Left Arrow) *Turn to port*
When followed by the number of the ship, it will turn 60 degrees counterclockwise. Use 0 to cancel an order. Execution is immediate and costs 2 command points.

(Right Arrow) *Turn to starboard*
The ship turns 60 degrees to starboard. Cost: 2 command points.

(Up Arrow) *Increase speed*
When followed by the number of the ship, will increase its speed one level, effective during the next movement phase. Cost: 2 command points.

(Down Arrow) *Decrease speed*
Reduces a ship's speed one level. Cost: only 1 command point.

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Production Coordination: *Phyllis Suddeth*
Prep. Dept. Coordinator: *Elaine M. Adkins*
Printing: *Monarch Services*

RAM!®

errata

NOTE: To load the game, type **TRINIT**, not **RAM** as specified in the rulebook.

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   ☐ Fantasy ☐ Science Fiction ☐ Sports
   ☐ Arcade ☐ Other: _____
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Computer Simulation Games

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RAM!®

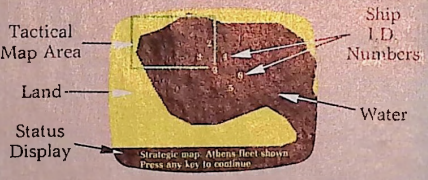
Ancient Greek Naval Warfare

Meanwhile, unstirring and with smoldering heart, the godlike athlete, son of Peleus, Prince Achilleus waited by his racing ships.
He would not enter the assembly of emulous men, nor ever go to war, but felt his valor stalling in his breast with idleness, and missed the cries of battle.

– Iliad, book 1

Chalcis. . .Naupactus. . .Erineus. These were grand naval battles, perhaps unknown to modern gamers enamoured with panzers, battleships and machine pistols. But to the men who rowed the bronze-plated triremes across the blue Mediterranean, they were sites of hard-fought engagements during the bloody Peloponnesian War. Now, with **RAM!**, you can refight these ancient naval battles, possibly to a new conclusion.

Strategic Map



CHALCIS: the well-manned Athenian fleet attempts to stop the Corinthian fleet from breaking out and delivering troops to their Spartan allies. As the Athenian commander, Phormio, you must ram and sink the enemy vessels. Beware, however: entangling your ships with the Corinthians' will lead to ship-to-ship melee and probable disaster, as the Corinthian marines are much to be feared.

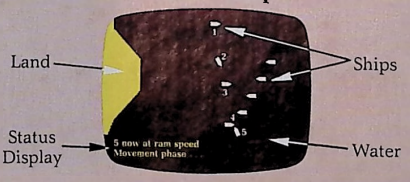
NAUPACTUS: while outfitting your ships for battle, your fleet is caught unawares by the Corinthians. Can you maneuver out of the trap and escape slaughter . . . with the enemy on one side and the rocky shore on the other?

ERINEUS: the Corinthians force a battle on equal terms. This time you are better prepared, but you are soon to discover that the enemy has a surprise for you: they have reinforced the bows of their triremes, making their rams even more deadly. Is your noble fleet a match for them?

RAM! simulates ship-to-ship combat during the Peloponnesian War for one player. In addition, the accompanying instructions contain historical commentary on the ships, the battle, and the fighting men. The computer keeps track of everything: from the strength of your attack to the fatigue of your rowers. This is a "real time" game; you must keep constant tabs on the situation, as indecision could mean quick defeat.

In addition to the above scenarios, **RAM!** also allows you to reenact your own historical engagement, or create a hypothetical one. You can even play the scenarios as a four battle campaign, refitting your ships and buying supplies between each encounter.

Tactical Map



RAM! is ready to run on your IBM® PC or PC jr with a minimum of 128K memory, a color graphics board and one disk drive. **RAM!** can also be played on:

- the Compaq® Computer with 128K RAM and one disk drive, or
- the Chameleon Plus® by Seequa with 128K RAM and one disk drive.

one player

complexity level: 6
(on a scale of 1-introductory to 10-advanced)

playing time: ½ to 1 hour

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